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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/848,885
Filing Date: May 04, 2001
Appellant(s): EPSTEIN ET AL.

Robert M. McDermott
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 01/09/06 appealing from the Office action mailed 10/27/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,785,815	Serret-Avila et al.	8-2004
6,266,299	Oshima et al.	7-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Regarding claim 1, Serret-Avila discloses a system that is configured to receive one or more select data items of a plurality of data items corresponding to a data set, comprising: a verifier that is configured to provide a verification of a presence of the data set (col. 11, lines 23-29; figure 15, element 1534), via: a first verification of a presence of a select subset of the plurality of data items (figures 9A-9B and corresponding text), and a second verification of a receipt of all of the plurality of data items (figures 10-11 and corresponding text), and wherein the verifier provides the

verification of the presence of the data set if either the first verification or the second verification occurs (figure 11 and corresponding text).

Regarding claim 2, Serret-Avila further discloses a renderer that is configured to receive the data items, and a gate, operably coupled to the renderer and the verifier, that is configured to selectively inhibit or allow access to an output of the renderer corresponding to the data item, based on the verification of the presence of the data set (figures 11 and 13).

Regarding claim 3, Serret-Avila further discloses that the renderer is further configured to store the one or more select data items in a secure format that inhibits a subsequent rendering of the data items, and the gate is further configured to allow the subsequent rendering of the data items from the secure format (figure 12B).

Regarding claim 4, Serret-Avila further discloses that the system is further configured to provide a recording of the one or more data items (figure 13).

Regarding claims 5-6, Serret-Avila further discloses that the verifier is configured to identify the select subset, based on a random process, and the first verification includes consideration of a likelihood of receiving or not the select subset of data items by chance occurrence (figure 9B, col. 17, lines 39-43).

Regarding claim 7, Serret-Avila further discloses that the second verification includes a likelihood of an inaccurate reception of the one or more data items (figures 5A-5B).

Regarding claim 18, Serret-Avila discloses a method of controlling a rendering of data items of a data set, comprising: receiving sections of the data set, conducting a

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first test for a presence of an entirety of the data set based on a receipt of randomly selected sections of the data set (col. 11, lines 23-29; figures 9A-9B), conducting a second test for the presence of the entirety of the data set based on a receipt of a quantity of different sections of the data set (figures 10-11; col. 17, lines 39-43), and controlling the rendering of the data items in dependence upon a result of either the first or second test (figure 11).

Regarding claim 20, Serret-Avila further discloses that each section further includes a section identifier, and the section identifier is included in each section as one or more watermarks (col. 20, lines 47-63).

Regarding claim 21, Serret-Avila further discloses a fragile watermark that is configured such that a modification of the section causes damage to the fragile watermark, and a robust watermark that is configured such that a removal of the robust watermark causes damage to the associated section (col. 20, lines 47-63).

Regarding claim 22, Serret-Avila further discloses that the data items correspond to at least one of digitally encoded audio content, and digitally encoded video content (col. 11, lines 23-28).

Regarding claim 23, Serret-Avila further discloses conducting a test includes verifying a random selection of the different sections of the data set (col. 20, lines 26-39).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serret-Avila as applied to claims 1 and 18 above, and further in view of Oshima et al (6,266,299).

Regarding claims 8-9, Serret-Avila further discloses that each data item of the plurality data items includes one or more sections, thereby forming a plurality of sections comprising the data set, each section of the plurality of sections including a section identifier corresponding to the section (figure 4A; col. 20, lines 47-63) and the first verification is based on one or more responses to requests for specific sections of the plurality of sections (figures 9A-9B). Serret-Avila does not disclose utilizing a data set identifier corresponding to the data set. Oshima discloses utilizing a data set identifier as a watermark (col. 7, lines 1-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Serret-Avila system to utilize a data set identifier as a watermark, as taught by Oshima, so that the origin of illegal copies could be determined from the watermark. Accordingly, the data set identifier is included in each section.

Regarding claim 10, Serret-Avila further discloses a fragile watermark that is configured such that a modification of the section causes damage to the fragile watermark, and a robust watermark that is configured such that a removal of the robust watermark causes damage to the associated section (col. 20, lines 47-63).

Regarding claim 11, Serret-Avila further discloses that the data items correspond to at least one of digitally encoded audio content, and digitally encoded video content (col. 11, lines 23-28).

Regarding claims 12-15, Serret-Avila further discloses that each data item of the plurality data items includes one or more sections, thereby forming a plurality of sections comprising the data set, each section of the plurality of sections including a section identifier corresponding to the section (figure 4A; col. 20, lines 47-63) and the second verification is based on a number of different sections received, compared to a total number of sections comprising the data set (figures 10-11; col. 17, lines 34-43). Serret-Avila does not disclose utilizing a data set identifier corresponding to the data set for verification. Oshima discloses utilizing a data set identifier corresponding to a data set as a watermark for verification (col. 7, lines 1-7; col. 35, lines 40-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Serret-Avila system to utilize a data set identifier corresponding to the data set as a watermark for verification, as taught by Oshima, to prevent reproduction of digital signal stored on illegal disks. Accordingly, the data set identifier is included in each section.

Regarding claim 16, Serret-Avila further discloses a fragile watermark that is configured such that a modification of the section causes damage to the fragile watermark, and a robust watermark that is configured such that a removal of the robust watermark causes damage to the associated section (col. 20, lines 47-63).

Regarding claim 17, Serret-Avila does not disclose via a verification of a correspondence among identifiers of the data set in each of the received data items. Oshima discloses a verification of a correspondence among identifiers of a data set in each of the received data items (col. 7, lines 1-7; col. 35, lines 40-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Serret-Avila system such that the verifier provides a verification of a correspondence among identifiers of the data set in each of the received data items, as taught by Oshima, to prevent reproduction of digital signal stored on illegal disks.

Regarding claim 19, Serret-Avila discloses conducting a test using a section identifier that is included in each section of the data set. Serret-Avila does not disclose conducting a test to verify a data set identifier that is included in each section of the data set. Oshima discloses conducting a test to verify a data set identifier included in data items of a data set (col. 7, lines 1-7; col. 35, lines 40-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Serret-Avila system to conduct a test to verify a data set identifier of the data set, as taught by Oshima, to prevent reproduction of digital signal stored on illegal disks. Accordingly, the data set identifier is included in each section.

(10) Response to Argument

a. **As per claim 1, Appellant states that Serret-Avila verifies only a subset (e.g. a song) of a data set (e.g. an album of songs) and thus cannot determine if other subsets are missing (page 5, last paragraph). Since the claimed data set is neither**

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defined in the specification nor appealed claim, a song that has been partitioned into a plurality of blocks as disclosed by Serret-Avila (col. 11, lines 23-32) would be reasonably interpreted by one of ordinary skill in the art as a data set. Serret-Avila discloses a system and method for verifying the presence of each data block/item of a received data set, i.e. verifying the signature of each data block to determine if the data block has been improperly modified or corrupted (Abstract; figure 11, steps 1104-1112; col. 20, line 64 – col. 21, line 24). Thus, by verifying the presence of each and every data block of the data set, Serret-Avila verifies the presence of the whole data set. Serret-Avila also discloses verifying if the received data set is a valid data set by verifying that certain data items designated as mark-holders that actually contain a strong watermark are present, i.e. verifying if the mark-holders exist, by analyzing the content of supposed mark-holders (Abstract; figure 11, step 1120; col. 19, line 53 – col. 20, line 46). Thus, by verifying whether a received data set is a valid data set, Serret-Avila also verifies the presence of the data set.

b. **Appellant states that Serret-Avila teaches verifying the presence of a watermark in a given subset but does not teach verifying the presence the subset. Appellant further states that Serret-Avila assumes the subset is present and therefore, does not address the possibility that the subset is not present (page 6, 1st paragraph).** First of all, Claim 1 does not concern if there is no presence of a select subset. Thus, Appellant's statement of "does not address the possibility that the subset is not present" is irrelevant to Appellant's claimed invention. Serret-Avila discloses a first embedding process comprising the steps of identifying blocks

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designated as mark-holder candidates in the data set, selecting mark-holders from the mark-holder candidates using a random key, inserting a strong watermark into the mark-holders (figure 9A; col. 19, line 53 – col. 20, line 23). Serret-Avila further discloses that only registered data sets contain a strong watermark (Abstract; col. 21, lines 4-7). Since not all data sets contain a strong watermark, Serret-Avila does not assume that the mark-holders containing the strong watermark are present in the data set. This is supported in lines 24-39 of column 20 where Serret-Avila discloses a first verification process comprising the steps of identifying mark-holder candidates in the data set, generating random keys, identifying supposed mark-holders from the mark-holder candidates using the random keys and analyzing payloads of the supposed mark-holders to determine if they are actual mark-holders (e.g., actually containing the strong watermark).

c. **Appellant states that Serret-Avila second verification is independent of the number of blocks presented, that nowhere in fig. 11 does the size of the data set appear, and that nowhere in fig. 11 is the value of “N” is tested or compared (page 6, last two paragraphs).** Figure 11 describes a data decoding and authenticating procedure corresponding to the data encoding procedure of figure 10 (col. 20, lines 64-66). Serret-Avila discloses in figure 10 that the data set (i.e., the PCM signal) is partitioned into N blocks and at the end of the encoding process, N encoded blocks are output (fig. 10, step 1006). Serret-Avila discloses in figure 11 that the encoded blocks output from figure 10 are processed using a FOR loop indicating

execution of N times (fig. 11, step 1104), which is the number of the encoded data blocks or the size of the data set in figure 10.

d. **As per claims 5-6, Appellant states that Serret-Avila does not teach identifying the select subset of the data set based on a random process (page 7, 3rd paragraph).** Serret-Avila discloses that the process of identifying mark-holder candidates of the data set is a random process as it involves probability. Serret-Avila further discloses that the process of identifying mark-holder from the mark-holder candidates is also a random process as it involves a key (col. 19, line 53 – col. 20, line 2).

e. **As per claims 18 and 20-23, Appellant states that Serret-Avila does not teach conducting a test for the presence of an entirety of a data set, and cannot be said to teach conducting a test for the presence of an entirety of the data set based on a receipt of randomly selected sections of the data set, and cannot be said to teach conducting a test for the presence of the entirety of the data set based on a receipt of quantity of different sections of the data set (page 8, 1st and 2nd paragraphs).** Claim 18 is a method claim corresponding to the system of claim 1. Please see the discussion with respect to the corresponding features of claim 1 above.

f. **As per claims 8-11, Appellant states that neither Serret-Avila nor Oshima teaches that the first verification is based on one or more responses to requests for specific sections of the plurality of sections (page 9, 3rd and 4th paragraphs).** Serret-Avila discloses that the encoding and decoding systems of figures 10 and 11 are described in connections with figures 4-8 (col. 21, lines 32-38). In figure 8, Serret-Avila

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further discloses a process used in the encoding system for embedding signature watermark into data items by which each data item, i.e. a data block, is partitioned into multiple sections, i.e. sub-blocks; each section is hashed; the hashes are concatenated; the concatenation of the hashes is encrypted; and the resulting signature is embedded into the next data item (col. 18, lines 16-27). Serret-Avila also discloses that the decoding system must have all sections of a block available in order to verify the signature of the block (col. 18, lines 28-33). In figure 11, Serret-Avila discloses that the first verification (figure 11, steps 1120 and 1122, which are explained in details in figure 9B) is based on (i.e., initiated by) a response to a request by the decoding system for the current data block to be processed wherein the response indicates that the signature of the current block is either not found or not verified (figure 11, steps 1106-1112). As discussed above, the decoding system must have all sections of the current data block, not any other block, available in order to perform steps 1106-1112.

g. **As per claims 12-13, Appellant states that neither Serret-Avila nor Oshima teaches that the second verification is based on a number of different sections received compared to a total number of sections comprising the data set because figures 10 and 11 do not include the total number of sections comprising the data set (page 10, 3rd paragraph).** Figure 11 in the Serret-Avila reference describes a data decoding and authenticating procedure corresponding to the data encoding procedure of figure 10 (col. 20, lines 64-66). Serret-Avila discloses in figure 10 that the data set (i.e., the PCM signal) is partitioned into N blocks, each block comprising a section, and at the end of the encoding process, N encoded blocks are output (fig. 10, step 1006).

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Serret-Avila discloses in figure 11 that the encoded blocks output from figure 10 are processed using a FOR loop indicating execution of N times (fig. 11, steps 1104-1112), which is the total number of sections comprising the data set of figure 10.

h. **As per claims 14-16, Appellant states that neither Serret-Avila nor Oshima teaches that the second verification is based on a verification of the section identifier of randomly selected sections (page 11, 1st paragraph).** Serret-Avila discloses that the second verification is based on a verification of the identifier (i.e., signature) of each section (figure 11, steps 1104-1112). After one section is finished, and as long as the count of the finished sections is less than the size of the data set, the procedure simply selects a next section without having knowledge of the section that will be selected in terms of its order, content, or signature; therefore, the selection process is a random process.

i. **As per claim 19, Appellant states that claim 19 is dependent upon claim 18 and because Serret-Avila does not teach the elements of claim 18, the rejection of claim 19 under 35 U.S.C. 103(a) that relies upon Serret-Avila for teaching the elements of claim 18 is unfounded (page 11, last paragraph).** Claim 19 is dependent upon claim 18, which is a method claim corresponding to the system of claim 1. Please see the discussion with respect to the corresponding features of claim 1 above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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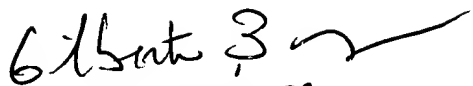
For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

MD

Minh Dinh
March 17, 2006

Conferees:


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